Grandstream Networks, Inc.
GXV3500 User Manual

Safety Instructions

These instructions are intended to assist users with the operation of the GXV3500 and also to instruct on how to avoid dangerous situations or damage to the device.

Warnings: Serious injury or death may be caused if any of the warnings below are neglected.
Cautions: Injury or damage to the equipment may occur if any of the following caution messages are neglected.

Warnings Follow these safeguards to prevent serious injury or death.

Cautions Follow these precautions to prevent potential injury or material damage.

Warnings:

Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with DC 12V according to the IEC60950-1 standard. Please refer to the technical specifications for more details.
Do not use a third-party power adapter or power cord
When the device is installed on the wall or ceiling, make sure that it is firmly attached.

Notice：

Make sure that the power supply voltage is correct before using the device.
Do not drop the device or expose it to physical shock.
Do not expose the device to temperatures outside the range of -10 ^{o}C to +60^{o}C when the device is in operation.
Do not expose the device to damp/wet conditions or high electromagnetism radiation.
To avoid heat accumulation, make sure that your operating environment has proper ventilation.
Do not attempt to open, disassemble, or modify the device
A few parts (e.g. electrolytic capacitor) of the equipment shall be replaced regularly according to their average life time. The average life time varies from the differences between operating environments and usage history. Regular maintenance checks are recommended for all users. Please contact your dealer for more details.

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Welcome

The GXV3500 is a powerful, next generation digital video surveillance encoder/decoder. The GXV3500 provides an easy to manage multi camera IP solution.

The GXV3500 combines cutting-edge technology, including: support for SIP, H.264 BP, 2-way audio, and PoE, for best-in-class scalability, ease of integration and security. The unique incorporation of TCP/IP protocols creates sophisticated, flexible networking and remote control abilities.

The GXV3500 features the advanced functionality of embedded analytics (including motion detection and video loss) and powerful pre-recording. Grandstream's flexible video management software enables users to monitor multiple environments in one easy to use application. The intuitive web interface lets users easily access, manage, view and record live video streams from the device.

The GXV3500 is a robust surveillance solution for small to medium sized offices and enterprise environments.

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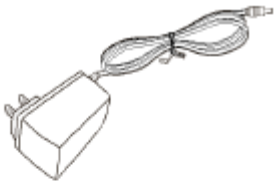
Package Contents

Items in the GXV3500 package:

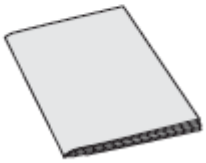
- GXV3500 – 1-channel digital video encoder/decoder
- 12V DC power Adapter
- 3.5mm to RCA audio/video cable
- Quick installation guide

GXV 3500



12V Power Supply

TV out RCA cable



QuickStart Guide

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Product Overview

GXV3500 Front Panel

1 V_IN – 1 BNC (Voltage: 1.0V p-p, Resistance 75Ω) port for video input
2 MIC IN – 3.5mm port for audio input devices, ie. Microphones
3 RESET - Press the Reset button for 15 seconds to perform a factory reset.

GXV3500 Back panel

1 DC 12V – 12V DC power port; insert the positive bare wire here (+12VDC), insert the negative bare wire into the GND port.
2 NETWORK – 10/100 Switch LAN port for connecting to Ethernet.
3 ALARM IN – 1 Alarm Input port for alarm equipment, ie. Infrared detector.
4 ALARM OUT – 1 Alarm Input port for detectors, ie. Sirens.
5 RS-485 – 1 PTZ connector.
6 AV_OUT – 3.5mm to RCA audio/video connection for output to display.

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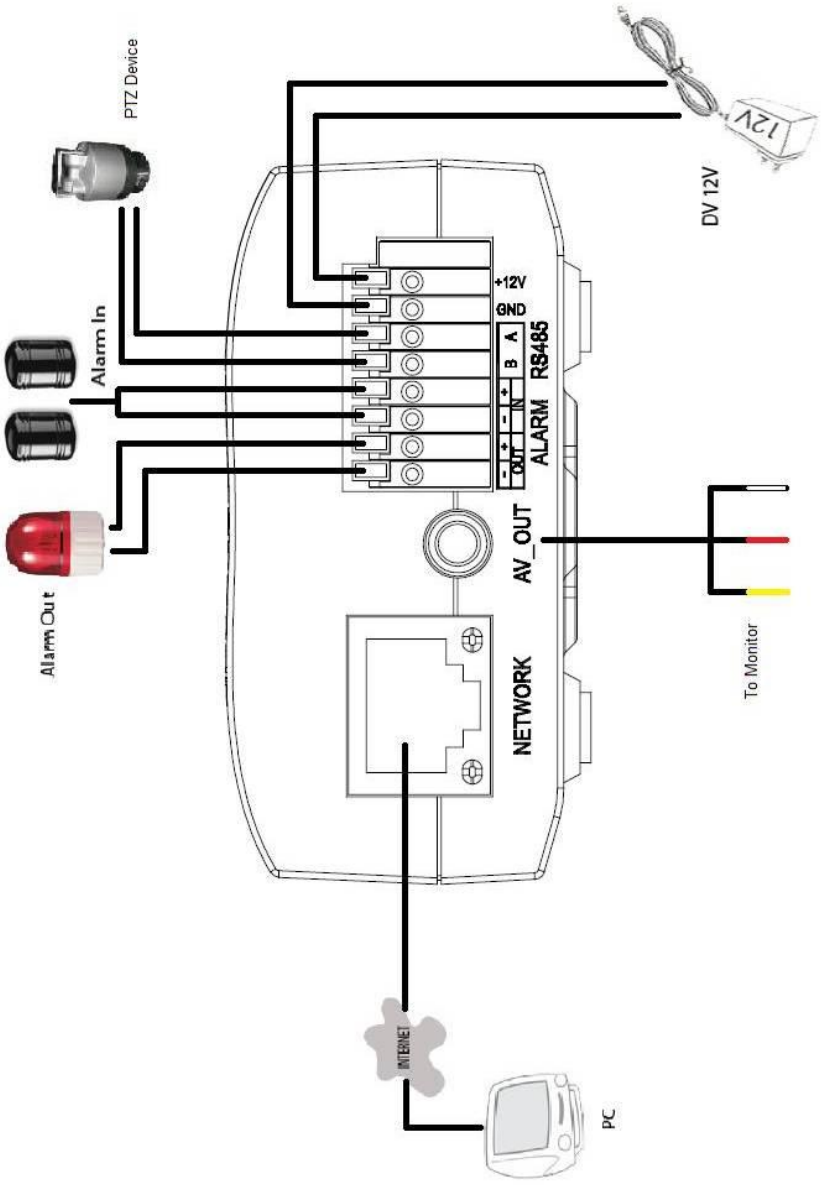
GXV3500 Sample Connection Diagram



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GXV3500Key Features

The table below lists the key features the GXV3500 Supports.

Feature	***GXV3500***
Channels	1
Video Compression	H.264 BP @Level 3.0, JPEG, Motion JPEG
Max Video Resolution	Full D1: 720 x 576(PAL) 720 x 480 (NTSC)
Max Frame Rate in Max Video Resolution	30fps/25fps at D1 (NTSC/PAL)
Video Bit Rate	32 Kbps – 2 Mbps
Video Input	1 BNC (voltage1.0Vp-p,resistance75)
Audio Input	3.5mm LINE IN
Audio Output	3.5mm to RCA LINEOUT
Audio Compression	G.711a/u
Alarm Input	1
Alarm Output	1
PTZ Control	Yes
Serial Ports	RS485
Embedded Analytics	Motion Detection (up to 16 target areas), video loss (pending)
Pre-/post alarm buffer	8MB
Snapshots	Can be sent via email/FTP when events are triggered.
Multi-streaming-rate for Preview and Recording	Yes
Security	On screen display, HTTPS, password
Power over Ethernet (PoE)	Standard, IEEE 802.3af Class 3
SIP/VoIP Support	Yes
Weight	123g
Temperature / Humidity	0°C – 45°C (32°F–113°F). Humidity 10–90% RH (non–condensing)
Power	Output: 12VDC/0.5A; Input: 100–240VAC, 50–60Hz

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Compliance	FCC Part15, Subpart B Class B; EN 55022 Class B, EN61000-3-2, EN61000-3-3, EN 55024, EN60950-1; C-tick AS/NZS CISPR 22, CISPR 24

Installation Guide

Minimum Recommended System Requirement

- Windows 2000 Server Professional, Windows XP, Windows Vista.
- CPU: Intel Pentium 4 or higher, 2 GHz.
- RAM: 1 GB (4 GB recommended for larger systems).
- Support for DirectX 8.0 and above.

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Connect your GXV3500

Using the Power adapter as power supply

- Connect the video output of an analog camera to the VIN port on the GXV3500 using a BNC (75Ω) cable.
- Connect an RJ 45 cable to the NETWORK port of the GXV3500
- Connect the other end of the RJ 45 cable to your network or PC directly
- Connect the bare wire marked as 12V from the power supply to the DC 12V plug on the back of the GXV3500. Connect the negative wire to the GND plug.
- Connect the other end of the power supply to a wall outlet.

Using PoE as power supply:

- Connect the video output of an analog camera to the VIN port on the GXV3500 using a BNC (75Ω) cable.
- Connect a RJ 45 cable to the NETWORK port of GXV3500
- Connect the other end of the RJ 45 cable to a PoE switch.

NOTE: If you are going to connect the device to a hub/switch/router, please use a straight-through cable. A cross over cable should be used if you are going to connect the device directly to a PC.

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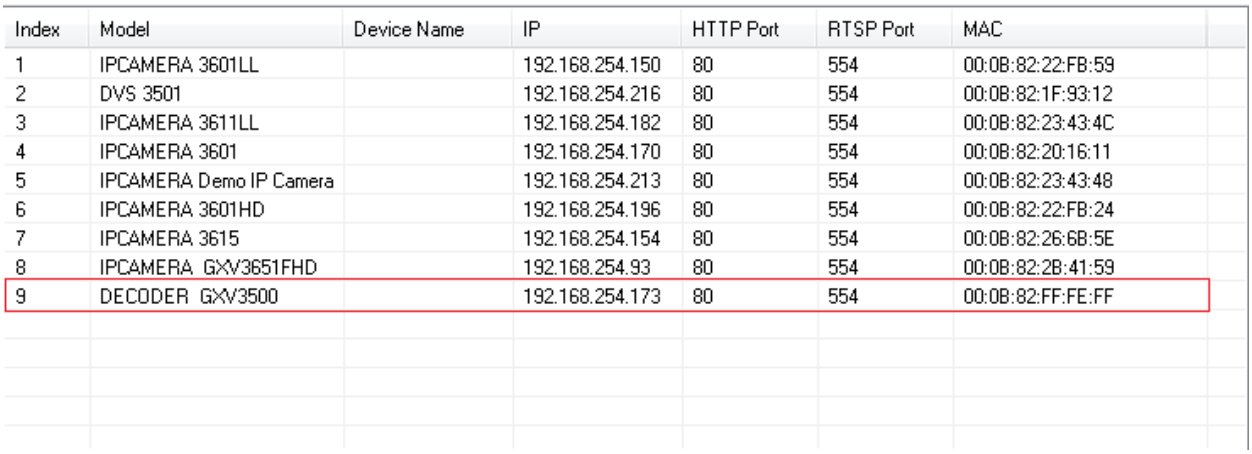
Configuring the GXV3500 via Web Browser

The GXV3500's embedded Web server responds to HTTP/HTTPS GET/POST requests. Embedded HTML pages allow you to configure your IP encoder/decoder through Microsoft Internet Explorer.

Connect the Device to a DHCP server.

1. Navigate your browser to: http://www.grandstream.com/support/gxv_series_surveillance/general/resources/gs_search.zip
2. Run the Grandstream GS_Search tool, that you just downloaded.
3. Click on the

button in order to begin device detection
4. The detected devices will appear in the Output field



Index	Model	Device Name	IP	HTTP Port	RTSP Port	MAC
1	IPCAMERA 3601LL		192.168.254.150	80	554	00:0B:82:22:FB:59
2	DVS 3501		192.168.254.216	80	554	00:0B:82:1F:93:12
3	IPCAMERA 3611LL		192.168.254.182	80	554	00:0B:82:23:43:4C
4	IPCAMERA 3601		192.168.254.170	80	554	00:0B:82:20:16:11
5	IPCAMERA Demo IP Camera		192.168.254.213	80	554	00:0B:82:23:43:48
6	IPCAMERA 3601HD		192.168.254.196	80	554	00:0B:82:22:FB:24
7	IPCAMERA 3615		192.168.254.154	80	554	00:0B:82:26:6B:5E
8	IPCAMERA GXV3651FHD		192.168.254.93	80	554	00:0B:82:2B:41:59
9	DECODER GXV3500		192.168.254.173	80	554	00:0B:82:FF:FE:FF

5. Start Internet Explorer ® on your computer.
6. Enter the device IP in the address bar of the browser.
7. Enter the administrator user name and password to access the Web Configuration Interface
8. The default user name and password are both set to ***admin***.
9. Once you log into the GXV3500's web interface, the device will indicate that you need to install or update the video plug in.
10. Save the VideoPlugine.exe file and run it on your computer. Then restart Internet Explorer. You should get a confirmation message regarding the installation of the plug in.
11. Once the installation of the plug in is completed, you will see the web page shown in the screenshot on the next page. Click on the play button to view the video feed.

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Connect to the Device Using a Static IP.

If the device does not get a response from the DHCP server after 3 minutes, it can be accessed by the default IP 192.168.1.168.

1. Connect your PC to the same network as the GXV3500.
2. Configure the IP address of your PC to: 192.168.1.XXX (1<XXX<255) and configure the subnet mask to 255.255.255.0.
3. Make sure that the device is turned on and connected to the network.
4. Start Internet Explorer on your computer.
5. Enter 192.168.1.168 in the address bar of the browser.
6. Enter the administrator user name and password to access the Web Configuration Interface
7. The default user name and password are both set to admin.
8. Once you log into the GXV3500 web interface, the device will indicate that you need to install or update the video plug in.
9. Save the VideoPlugine.exe file and run it on your computer. Then restart Internet Explorer. You should get a confirmation message regarding the installation of the plug in.
10. Once the installation of the plug in is completed, you will see the web page shown in the screenshot on the next page. Click on the play button to view the video feed.

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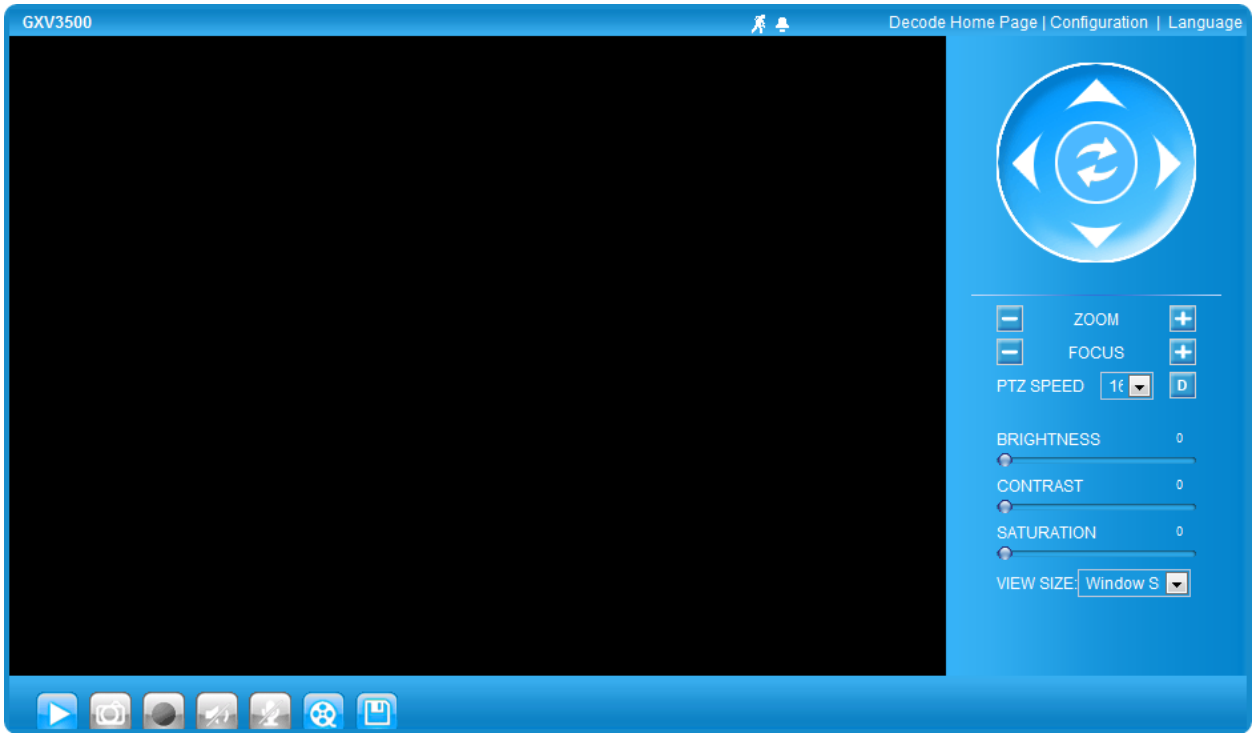
GXV3500 Encoder Web Page



Items on GXV3500 Home Page

1	***Control Console***	PTZ Console controller. PTZ device needs to be connected.
2	***Motion Detection***	If the motion detection alarm is triggered, the indicator of the corresponding channel will ***flash red***. Click on the indicator to turn off the alarm.
3	***Alarm Event***	If an alarm event is triggered, the indicator of the corresponding channel will ***flash red***. Click on the indicator to turn off the alarm.
4	***Default***	Click this option to reset the video brightness, contrast, and saturation to their factory default configuration.
5	***ZOOM***	Zoom in and out of the image in the selected channel.
6	***FOCUS***	Adjusts the focus of images in the selected channel.
7	***SPEED***	Adjusts the rotation speed of the console.
8	***BRIGHTNESS***	Adjusts the image brightness in the selected channel.
9	***CONTRAST***	Adjusts the image contrast in the selected channel.
10	***SATURATION***	Adjusts the image saturation in the selected channel.
11	***Play***	Plays/Stops the video.
12	***Capture***	Captures the image displayed in the selected channel and saves it to ***C:\GS_Capture*** (default directory).
13	***Record***	Records the video in the selected channel, and saves it to ***C:\GS_Record*** (default directory).
14	***Talk***	Establishes two-way audio within the selected channel.
15	***Sound Off/On***	Toggles the sound of the selected channel On or Off.

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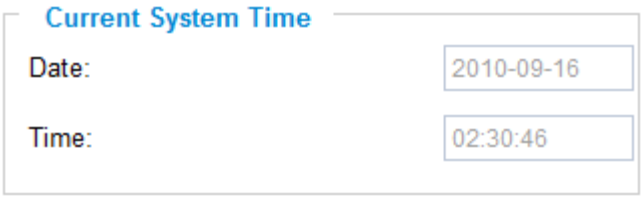
16	***Playback***	Replays the saved video.
17	***Config***	Configures the Save Location for captured images and recorded videos.
18	***Language***	Selects between English or Chinese as the display language
19	***Decode***	Sets up the device as a decoder after reboot.

GXV3500 Basic Settings

GXV 3500 System Page

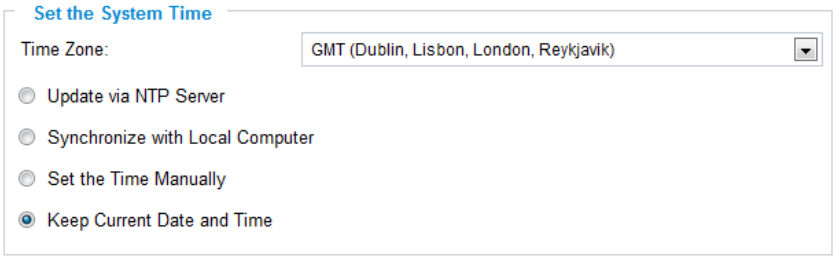
This page allows you to configure the system settings on the IP camera.

Current System Time - displays the current date and time (24h clock).



Set the System Time

Update via NTP Server - the camera will obtain the time from an NTP server Specify the NTP server's IP address or host name. And you can select your time zone from the drop-down list or define your own time zone setting.


Set the System Time
Time Zone:
GMT (Dublin, Lisbon, London, Reykjavik)
Update via NTP Server
Synchronize with Local Computer
Set the Time Manually
Keep Current Date and Time

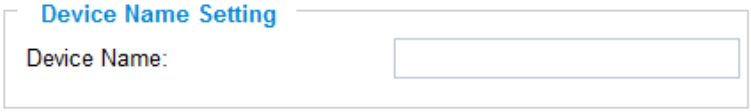
NOTE: If using a host name for the NTP server, a DNS server must be configured under ***Basic Settings -> Networking***.

Synchronize with Local Computer - sets the time from the clock on your computer.

Set the Time Manually - this option allows you to manually set the time and date.

OSD Date Format - set the format of date on OSD

Device Name Setting -This field lets you configure the name of the IP camera, which helps the VMS and NVR to indentify the device when using ***Search*** to search all the IP camera company's network cameras or digital video cameras in the same subnet.



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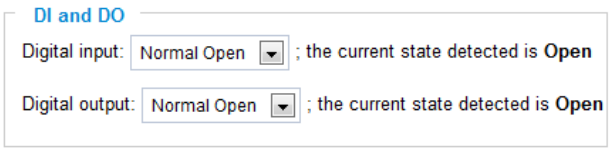
DI and DO - Digital input and digital output


DI and DO
Digital input: Normal Open ; the current state detected is Open
Digital output: Normal Open ; the current state detected is Open

Normal open: the circuit is by default open unless an event triggers the device to close the circuit.

Normal close: the circuit is by default closed unless an event triggers the device to open the circuit

GXV3500 Video & Audio Page

On Screen Display (OSD) Settings

OSD Time/ Text – The time stamp and channel name displayed on the screen.

Video Settings

Preferred Video Codec – The GXV3500 supports the H.264 and MJPEG video codecs.

Resolution – The higher the resolution is, the better the video quality is, and higher bandwidth is required.

Low ----------→ High Resolution

QCIF CIF 2CIF D1

Bit Rate – The number of bits that are conveyed or processed per unit of time.

Maximum Frame Rate – The video frame rate is adjustable based on network conditions. *Increasing the frame rate will increase the amount of data significantly therefore consuming more bandwidth***.** Video will be impaired due to packet loss when there is insufficient bandwidth.

Bit Rate Control – Variable Bit rate (VBR) and Constant Bit Rate (CBR).

Variable Bit Rate - If VBR is selected, the codec varies the amount of output data per time segment. VBR produces a better quality-to-space ratio. The bits available are used to enable more flexibly and encode sound or video data more accurately, with fewer bits used in less demanding passages and more bits used in difficult-to-encode passages.

Constant Bit Rate - If CBR is selected, the codec's output data is constant regardless of the input data. The output bit rate is defined in "Bit rate". CBR is useful for streaming multimedia content on limited capacity channels. It is easier to calculate required bandwidth as well as the required storage space using CBR.

I-frame Interval – While streaming video over a network, compression technologies are used to show the incremental difference between each frame. I-frames are used to help keep the video looking normal. When intervals are shorter, the video quality is higher but uses more bandwidth.

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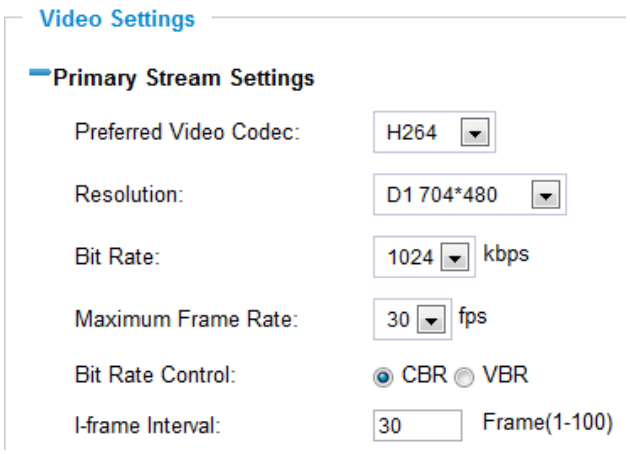


NOTE: The users might need to configure the ***Primary Stream*** and ***Secondary Stream*** properly. Sometimes, the user might like to watch the live video stream from the web GUI in low resolution mode while recording a copy in high resolution mode due to the limitation of internet bandwidth. In this case, for example, primary stream can be configured to have better resolution, and then the users can use primary stream to record while watching secondary video streams.

Audio Settings

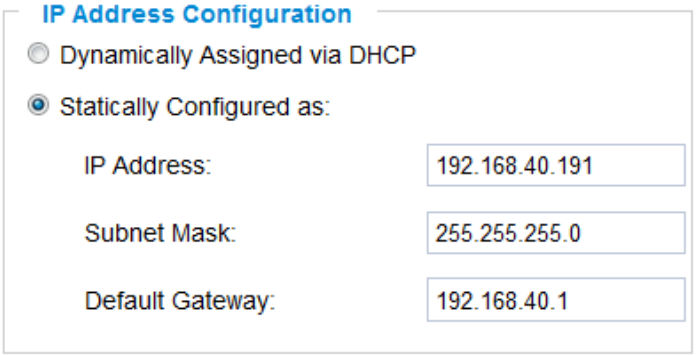
Preferred Audio Codec – The GXV3500 supports 2 different vocoder types, a-law (PCMA), u-law (PCMU).
Microphone Volume – Values can go from 1 to 5
Speaker Volume – Values can go from 0 to 31

GXV3500 Networking Page – Assign an IP to the IP encoder/decoder

The GXV3500 supports IP version 4. The IP address can be set automatically via DHCP, or a static IP address can be set manually. To have the device work properly, the user needs to set the DNS configuration properly. For security purposes, the user can also assign the IP camera an HTTP Port other than 80.

IP Address Configuration

The GXV3500 operates in two modes:
Dynamically Assigned via DHCP – all the field values for the Static IP mode are not used. The GXV3500 acquires its IP address from the first DHCP server it discovers on its LAN.
Statically Configured as – configures all of the following fields: IP address, Subnet Mask, Default



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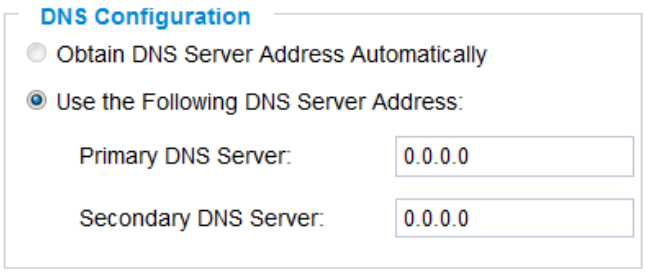
Gateway IP address, DNS Server 1 (primary), DNS Server 2 (secondary). These fields are set to zero by default. *Static IP addresses are recommended for the GXV3500*

DNS Configuration

There are two methods of DNS configuration on the GXV3500:
1. The GXV3500 can obtain the DNS server automatically
2. Users can configure their own preferred DNS server



HTTP Port

The GXV3500 supports user configured http ports. If the HTTP port is changed, the port number is needed to access the web GUI, for instance: http://192.168.1.168:8080.

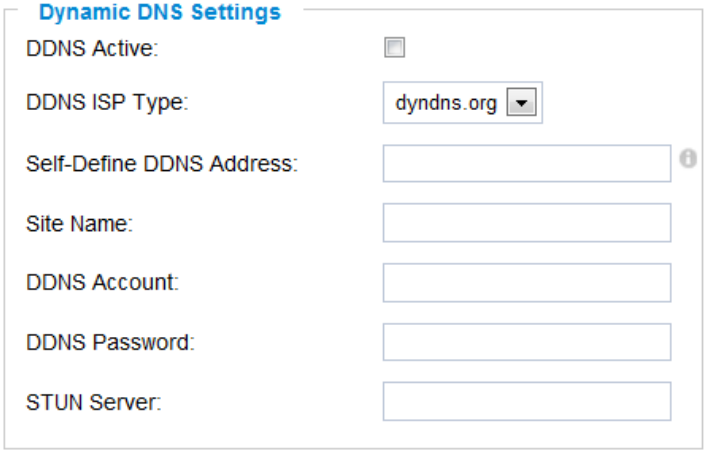
NOTE: If the HTTP Port is 80, when you add this device to the VMS or NVR, the RTSP port is 554. If the HTTP Port is changed, when you add this device to the VMS or NVR, please make sure the RTSP port number equals HTTP Port plus 2000.

GXV3500 DDNS Page

Dynamic DNS provides devices that have a variable, often changing IP address with a well known hostname resolvable by network applications through standard DNS queries.

Set up DDNS

1. Apply for a domain name from your service provider.
2. Login to the web configuration page, click ***Basic Settings*** > ***DDNS***.
3. Enter the required information
   DDNS Active – If you want to use DDNS, please set this field to “Enabled”.
   DDNS ISP Type – Select your DDNS ISP Type.



Self-Define DDNS Address – Self-define the DDNS server instead of using DDNS

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ISP Type.

Site Name – The DDNS name for your device.

DDNS Account/ DDNS Password – The account and password from the DDNS Provider.

STUN Server – If the device is behind a router, a STUN server is needed to help penetrate the NAT.

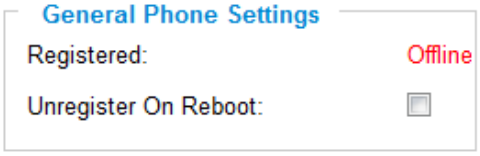
4. Click ***Save*** to save the changes. You might need to reboot the device to apply all the changes.

GXV3500 SIP Page

The GXV3500 has the ability to receive phone calls and make phone calls when an alarm event is triggered through motion detection or alarm input. Register the IP camera to a SIP server to enable the product to make and receive phone calls. To make outgoing phone calls out, the user needs to configure the ***Phone List*** properly.

Register the GXV3500 to a SIP Server

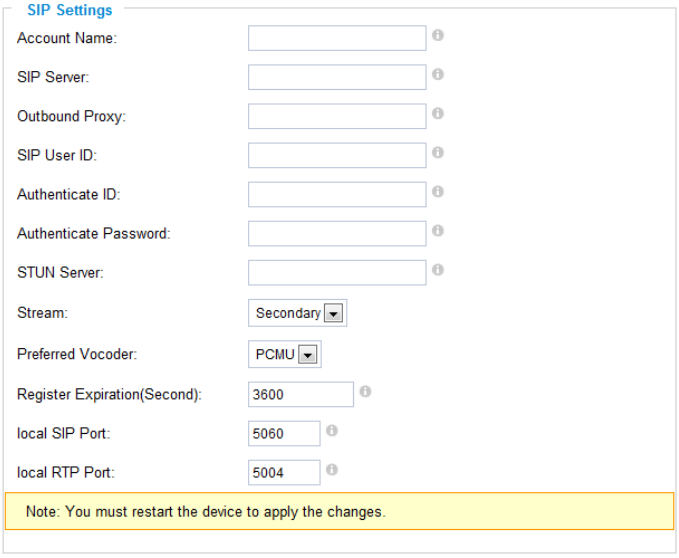
1. From the GXV3500 home page, click ***Basic Settings*** > ***SIP***.
2. Go to ***SIP Settings*** Tab.
3. General Phone Settings.



Registered – The field shows the registration status of the account with the SIP server.

Unregister On Reboot – If it's checked, the SIP user's registration information will be cleared from the server when the device reboots.

4. Enter the required information.



Account Name – The field configures the SIP account name.

SIP Server – The SIP Server's IP address or Domain name provided by your service provider.

Outbound Proxy – The IP address or Domain name of the Outbound Proxy, Media Gateway, or Session Border Controller. Used for firewall or NAT penetration in different network environments. If the system detects a symmetric NAT, STUN will not work. ONLY outbound proxies can provide a solution for a symmetric NAT.

SIP User ID – User account information provided by your service provider (ITSP); this is either an actual phone number or is formatted like one.

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Authenticate ID – The SIP service subscriber's Authenticate ID used for authentication. It can be identical to or different from the SIP User ID.
Authenticate Password – The SIP service subscriber's account password for the GXV to register to the SIP server of the ITSP.
STUN Server – If the device is behind a router, a STUN server is needed to help penetrate the NAT.
Stream – Choose between Primary and Secondary stream.
Preferred Vocoder – Choose different vocoder type.
Registration Expiration – This parameter allows users to specify the time frequency (in minutes) in which the device refreshes its registration with the specified registrar. The default interval is 60 minutes.
Local SIP Port – This parameter defines the local SIP port used to listen and transmit. The default value is 5060.
Local RTP Port – This parameter defines the local RTP-RTCP port pair that is used to listen and transmit. The default value is 5004.
Auto on Hook Timer – This parameter is used to automatically hang up a call after the specified amount of seconds.

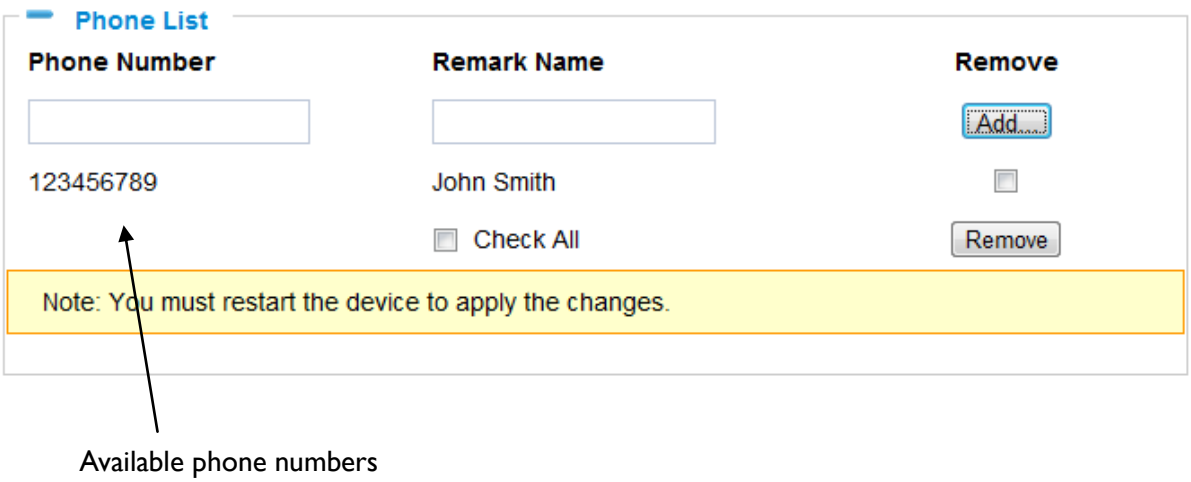
5. Click ***Save*** to save all the changes. You need to restart the device to apply all changes.

Configure ***Phone List*** Page

To make sure the device can make phone calls to the number you preferred when the alarm is triggered. You need to add number to the phone list.

Steps to add phone number:

1. From the IP camera home page, click ***Basic Settings*** > ***SIP***.
2. Go to ***Phone List*** Tab.
3. Enter the ***Phone number*** and ***name***, click ***Add a Number to*** save all the changes.
4. Numbers added to the system will be listed in this page.



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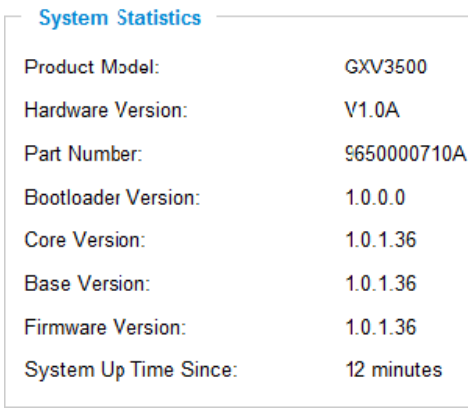
NOTE: With current firmware, only the first phone number in the list will be called when an alarm is triggered.

Status Page

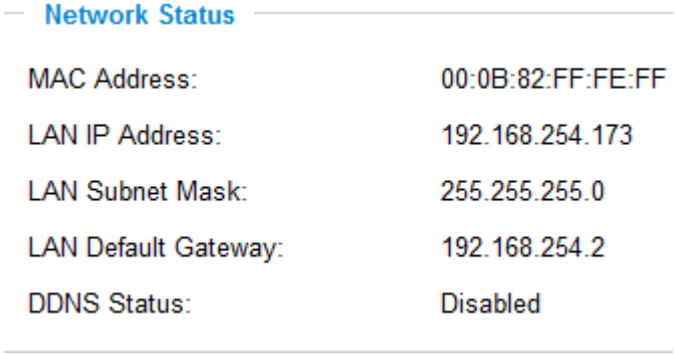
The Status Page lists hardware and software information, for example, the part number, the software version, about the GXV3500.

Hardware Version – This field contains the product's hardware information.
Part Number – This field contains the product's part number information.
Bootloader Version – Bootloader code version number.
Core Version – Core code version number.
Base Version – Base code version number.
Firmware Version – Firmware code version number.
System Up Time Since – This field shows the system up time since the last reboot.



Network Status

MAC Address – The device ID, in HEXADECIMAL format.
LAN IP Address – This field shows the LAN IP address of the GXV3500.
LAN Subnet Mask – This field shows the LAN subnet mask of the GXV3500.
LAN Default Gateway – This field shows the LAN default gateway of the GXV3500.
DDNS Status – This field shows the status of DDNS.



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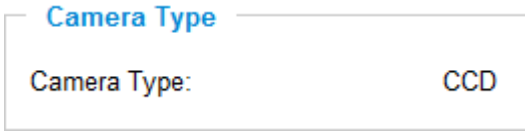
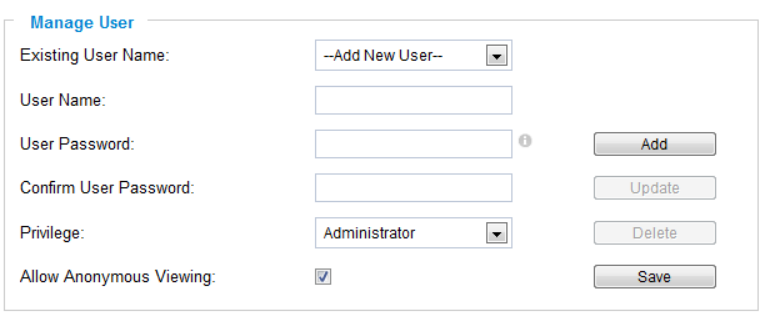
Camera Type

This section shows the Lens information of GXV3500. The Lens type information contains the brand name, the size of image sensor, the resolution and so on.



GXV3500 User Management Page

All current users will be list in the User List section of this page. You can also add and remove users here.



Existing User Name –The field lists all of the current users. You can insert or remove users from the list by click on the ***Add*** or ***Update*** or ***Delete*** button.

User Name / Password – The user name and password required to login.

Privilege – The privilege for the user to access to configuration page.

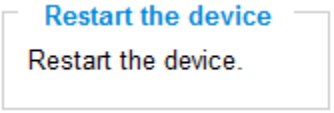
Allow Anonymous Login – If 'Allow Anonymous Login' is set to Yes, no user name and password are required to login to the IP camera web configuration pages.

If you login anonymously, you will not be able to change any settings.

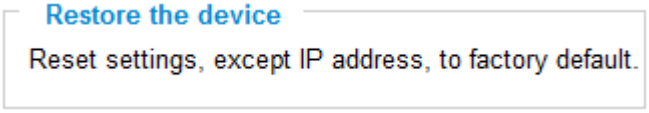
GXV3500 Maintenance Page

Server Maintenance

Restart – Click this button to restart the device**.**



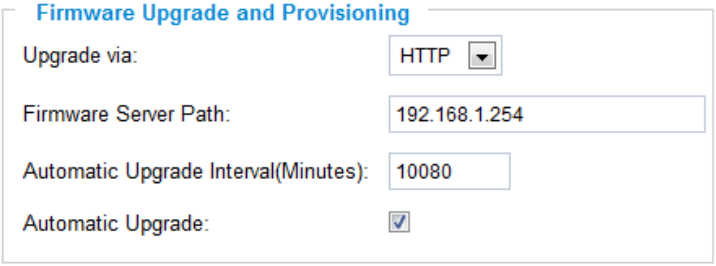
Restore – Click this button to perform a partial factory reset (The IP address will not be cleared)**.**



Firmware Upgrade and Provisioning Items

Upgrade via – This field lets you choose the firmware upgrade method. The IP camera supports HTTP, HTTPS and TFTP.

Firmware Server Path – The IP address or domain name of the firmware server (the location of the



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firmware files).
Config Server Path - The IP address or domain name of the configuration server (the location of the XML configuration files).
XML Config File Password – The password used to authenticate the XML file.
Automatic Upgrade Interval – Enter the frequency (in minutes) in which the HTTP/HTTPS/TFTP server will be checked for new firmware upgrades or configuration changes.
Automatic Upgrade – The default setting is "No." Choose "Yes" to enable automatic. HTTP/HTTPS/TFTP upgrade and provisioning. When set to "No", the IP Camera will only perform a HTTP/HTTPS/TFTP upgrade and perform a configuration check once during the boot process.

Performing a firmware upgrade:

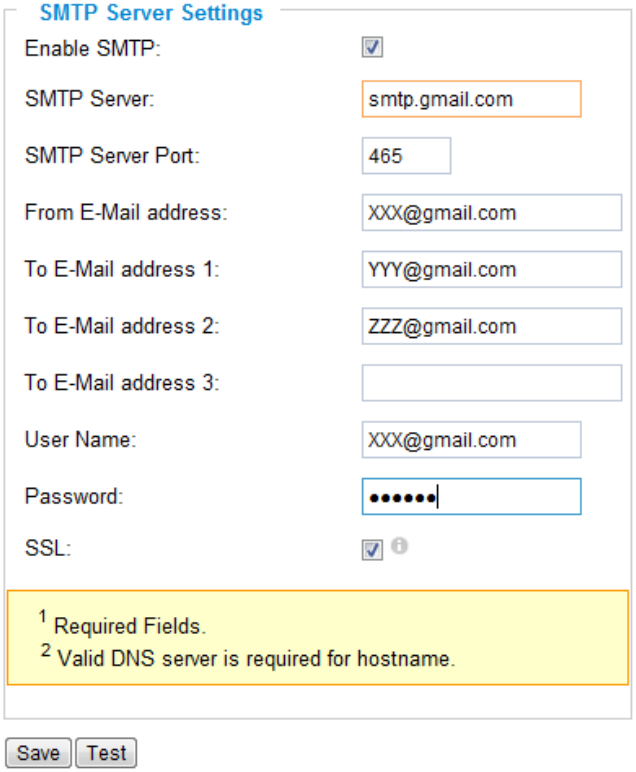
1. Download the firmware package from http://www.grandstream.com/support/firmware
2. Unzip the firmware package and copy the files to the firmware upgrade server directory.
   Upgrades are supported via TFTP, HTTP and HTTPS.
3. Log in to the ***Maintenance page*** of the IP camera. Select the server type from the dropdown list under the "Upgrade Via" field. Enter your server's root directory in the "Firmware Server Path" field.
4. Reboot the IP camera to begin the firmware upgrade process.

GXV3500 SMTP Page

The SMTP server is used to send out emails when an alarm event or motion detection is triggered. The SMTP settings must be configured to make sure the alarm email is sent out properly.

SMTP Server Settings

Enable SMTP – Checked to enable SMTP
SMTP Server – The IP or hostname of the SMTP server, for example, smtp.gmail.com.
SMTP Server Port – The port of the SMTP server. The GXV3500 supports port 25 and SSL port 465, which is for SMTP with an encrypted connection.
From E-Mail Address – The email address that sends out the alarm email(s).
To E-Mail Address – The email addresses that the alarm email(s) will be sent to. You can have up to 3 emails



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configured.

User Name/ Password – The user name and password required to log in to your SMTP server, for example, 123@gmail.com/123.

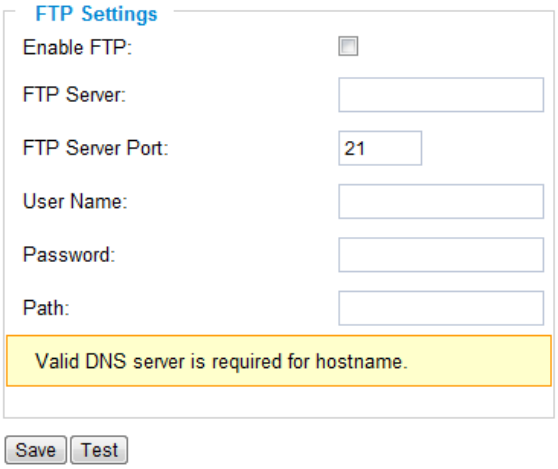
SSL – Checked if the SMTP server requires a secure connection.

Test Email Account Settings – Click the Test button to send a test email from the *From E-Mail* to the *To E-Mail* to make sure that SMTP is configured properly. If the receiver can get the test email, then the SMTP settings are ready to go.

GXV3500 FTP Page

The FTP server is used to store video files if you configure the GXV3500 to record video and upload it to the FTP server when an alarm event or motion detection is triggered.

FTP Settings



Enable FTP – The default setting is "No," if you want the IP camera to upload the recorded video to the FTP server when an alarm is triggered, set this field to "Yes."

FTP Server – The IP address or hostname of the SMTP server, ie. ftp.myserver.com.

FTP Server Port – The port that your FTP server is using.

User Name / Password – The user name and password required to log into your FTP server

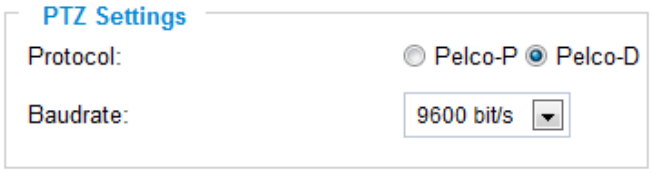
Path – The directory in the FTP server where recorded video will be uploaded.

Test FTP Account Settings – Click the Test button to upload a sample file to make sure that FTP is properly configured.

GXV3500 PTZ Page

This page configures the PTZ settings. Select the ***PTZ protocol*** that your connected equipment supports by clicking on the radio in front of the protocol. Next, select the ***Baudrate*** from the drop down menu.

PTZ Configuration Items



PTZ Protocol – The GXV3500 supports both Pelco-D and Pelco-P. Select the protocol your PTZ equipment supports.

PTZ Baudrate – The Baud rate is the number of distinct symbol changes (signaling events) made to the transmission medium per second in a digitally modulated signal or a line code.

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Connect a PTZ device to the GXV3500

1. Connect the PTZ device to GXV3500 by using the RS-485 port. Connect the A pin to the positive cable of the PTZ device. Connect the B pin to the negative cable of the PTZ device. The PTZ device has its own power
2. Click ***Advanced Settings*** > ***PTZ***; in ***PTZ*** page, configure the ***PTZ Protocol*** and ***Baudrate*** according to your connected PTZ device.
3. Click ***Save*** and reboot the device to apply all changes.
4. Use those PTZ buttons on the homepage to tilt, pan the GXV3500 and also adjust the speed.

NOTE: GXV3500 itself does not support PTZ. The users can connect a PTZ device to the GXV3500 via RS485 pins to pan, tilt and speed.
The FOCUS function may not work as many dome cameras support auto focus.
Press and hold the corresponding control button to adjust the pan, tilt, and speed.

IP camera Alarm Servers

Server Name – Enter the name of the server that will receive the alarm HTTP notifications
URL – Enter the URL or IP address of the server that will receive the alarm HTTP notifications
User Name – Enter the username to authenticate with the HTTP server
Password – Enter the password to authenticate with the HTTP server

GXV3500 Alarm Event

The GXV3500 supports alarm inputs, for example, infrared detector, smoke detector and so on. Follow the steps to make Alarm Input work:

1. Connect alarm input equipment to the GXV3500.
2. Set up the alarm event time schedule.
3. Configure the alarm actions which you would like the GXV3500 to take when alarm is triggered.

How Alarm Input and Alarm Output Work

Alarm-in is the alarm input port; users are able to connect sensors such as infrared sensor, smoke sensor or light sensor to it. The detectable signal voltage range for alarm-in is from 2.5V to 45 V ***NOTE:*** Please do not connect a device that has a signal voltage that is higher than 60V, this will damage the IP encoder/decoder.
Internally, the Alarm-out uses relays as a switch (30VAC/2A); users can connect devices such as alarm siren or alert light to this port. Under normal circumstances, the circuit is open. When there is an alarm event, the GXV3500 will close the circuit to trigger the alarm.

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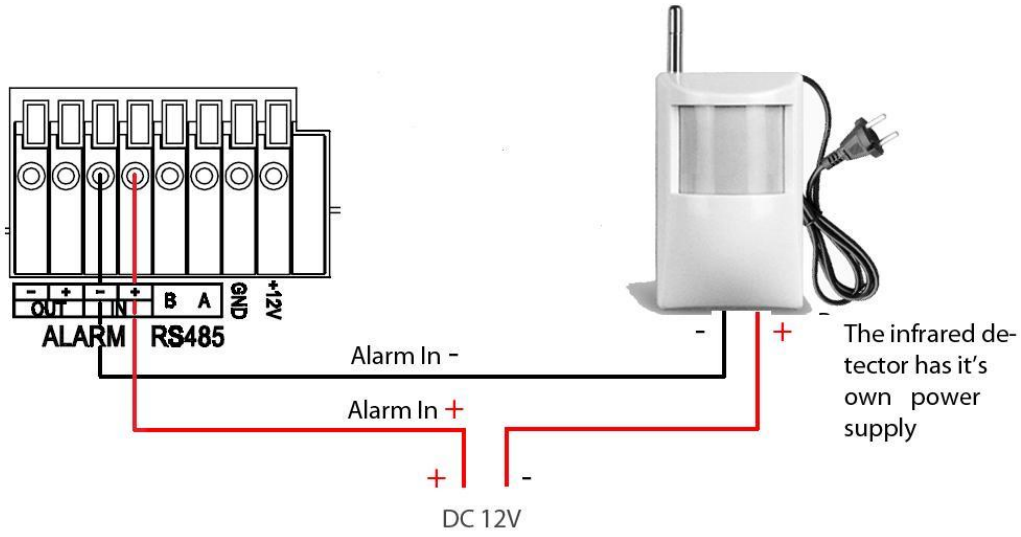
Connect Alarm Input Equipment to the GXV3500

Here are two sample connection diagrams. Connect the alarm equipment to the GXV3500 by following the diagram below.



Set up Alarm Actions

An alarm action is what the GXV3500 is going to do when an alarm is triggered during the defined time period – the time schedule. The GXV3500 allows multiple alarm actions.

Record Video – If this option is selected, the GXV3500 will record the video when an alarm is triggered. You can enter the length of the video recording (in seconds).

Voice Alarm to SIP Phone – If this option is selected, the GXV3500 will make calls to the number listed in the ***Phone List*** page using the configured SIP account when an alarm is triggered. To use this function, the settings in *SIP* page must be configured properly.

Alarm Output – If this option is selected, the alarm will output via the configured method/equipment when it is triggered.

Upload to Alarm Center – This option is an integrated feature with GSurf. If this option is checked, the GXV3500 will report the alarm event to Gsurf.

Upload to Alarm HTTP server – This option is an integrated feature with the third party VMS. If this option is checked, the GXV3500 will report the alarm event to the third party VMS.

Record Video and Upload to FTP Server – This option will upload the recorded video in the device's buffer to the FTP server configured.

Email and FTP upload JPEG – If this option is selected, the GXV3500 will capture the image and upload it to the FTP center when an alarm is triggered. It will also email the image to the configured email accounts under the SMTP settings.

Set up DI Alarm Time Schedule

This section allows you to configure the time during which the GXV3500 will monitor the Alarm Input. The GXV3500 not only can monitor your settings but also can take actions when

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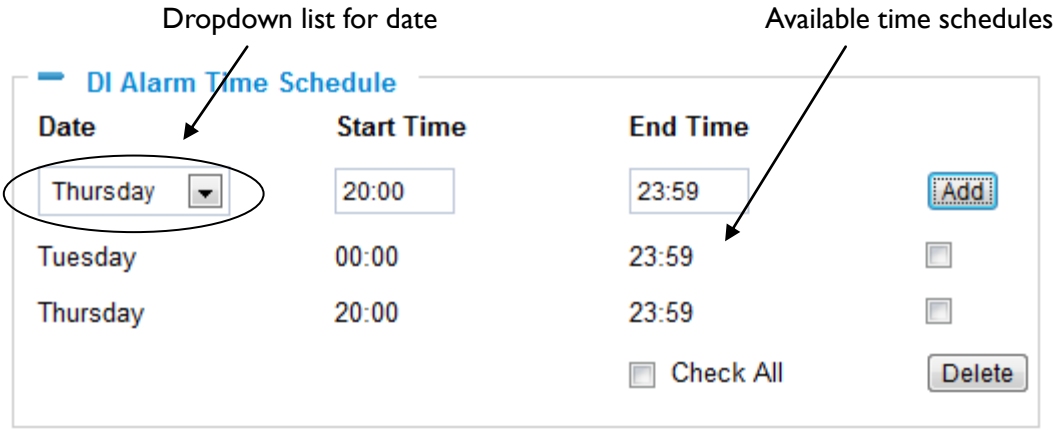
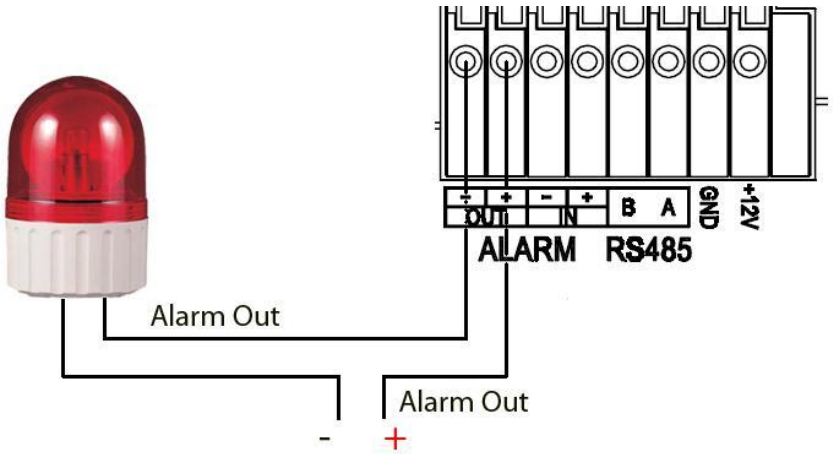
the alarm is triggered.



To add a schedule, select the ***date*** from the dropdown list, ***Start Time*** and ***End time*** and Click ***Add*** to add a new time schedule.
To delete a schedule, check the schedule you would like to remove and click ***Delete***.

How to connect an Alarm Output Equipment to GXV3500

Here is a sample connection diagram. Connect the alarm output equipment to the GXV3500 by following the diagram below.



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GXV3500 Motion Detection

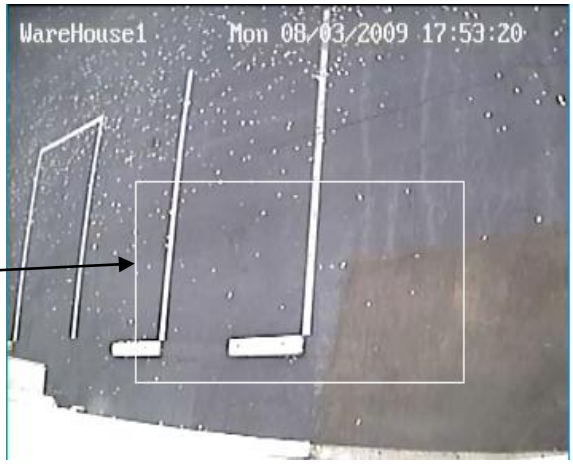
The GXV3500 supports Motion Detection. To utilize this feature, please follow the below steps:

1. Setup the motion detection monitored area.
2. Configure the motion detection time schedule.
3. Configure alarm action properly.

Setup Motion Detection Monitored Area

Enable Motion Detection – If this option is selected, motion detection will be enabled. If something/somebody moves in the motion detection region, an alarm will be triggered.

Show Motion Detection Regions – If this option is selected, the motion detection regions will be displayed on the screen with a white border.



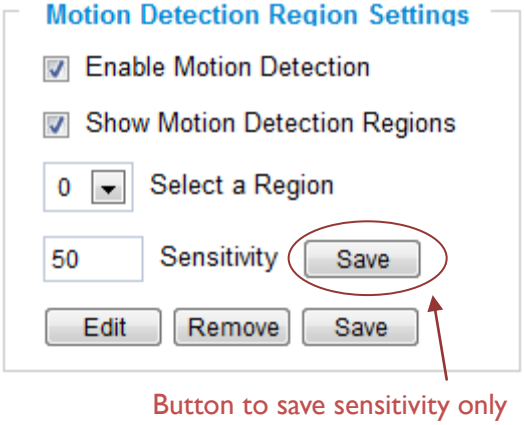
The white border for Motion Detection Regions

NOTE: If ***Upload to Alarm center*** is checked for ***Alarm Actions***, the white border will ***flash red*** when a motion detection alarm is triggered.

To Edit a Monitored Area

1. In the ***Select a Region*** dropdown list, select the region ID.
2. Click ***Edit***.
3. Click on the video, drag and draw you preferred area.
4. Set the Sensitivity. Click the ***Save*** button to save the sensitivity.

   NOTE: The Sensitivity value varies from 0 to 100. The larger the value is, the higher the sensitivity.
5. Click ***Save*** to save the settings.



To Remove a Monitored Area

1. In the ***Select a Region*** dropdown list, select the region you would like to remove.
2. Click ***Remove***.
3. Click ***Save*** to save the changes.

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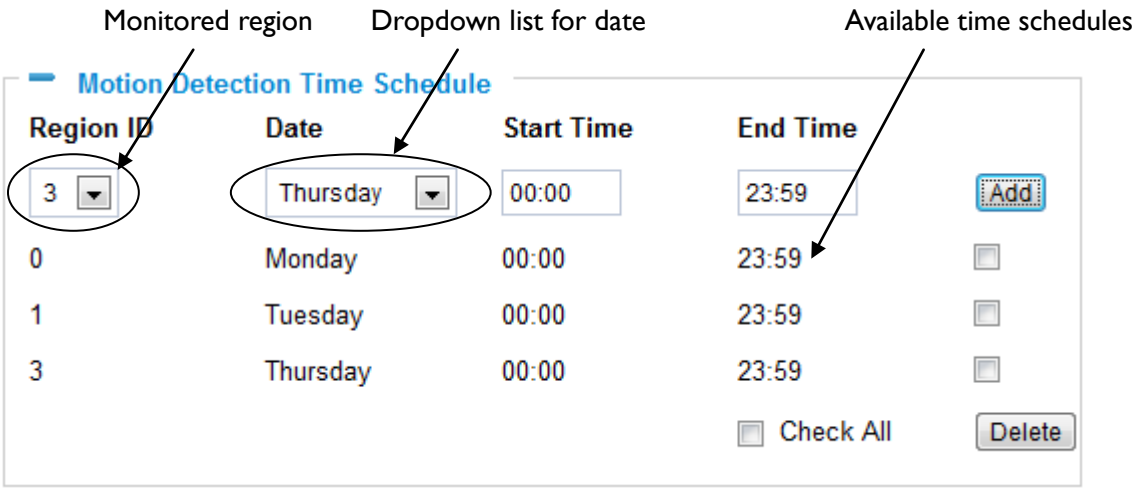
Configure Motion Detection Time Schedule & Alarm Actions

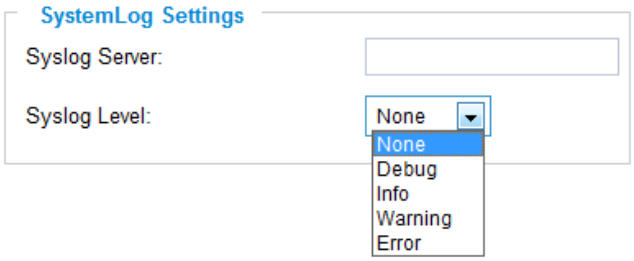
This section allows you to configure the time during which the IP camera will monitor the motion detection. The IP camera not only can monitor your settings but also can take actions when the alarm is triggered.



IP camera System Log

This page is used to set up the system log server path and system log level. Once they are correctly configured, the device will send out system log messages to the system log server, which will help perform troubleshooting.

Syslog Server – The IP address or URL of System log server.
Syslog Level – Select the device to report the log level. Default is None. The level is one of Debug, Info, Warning or Error.



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GXV3500 Decoder Home Page

When the device is configured as a decoder it can receive the video and audio signal through RTSP from up to 8 cameras in the network. The device will output the video and audio signal from these cameras through its AV out port. This is an analog output and can be connected to any monitor or TV that can receive a analog input (yellow, red, white). The patrol mode allows the user to rotate the displayed image on the screen in the amount of seconds specified. You can preview the image on the display in the home page. This feature is particularly useful to carry AV signals to remote locations without the need for a PC for the decoding process. IT also allows for a single wire (Ethernet) to be deployed instead of deploying a separate cable for AV.

Items on GXV3500 Decoder Home Page

1	***Decoder Source***	Select between an RTSP source (IP camera) or a SIP phone or SIP device
2	***Default Decode***	This will be the default device from the list that will be decoded
3	***Enable Patrol***	This option will rotate the video from the different source on the

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		screen according to its patrol time.
4	***Patrol***	Click on this box to allow the source to become part of the patrol video rotation
5	***Host Address***	The IP address of the video source to be decoded
6	***Port***	The video source's TCP/UDP port number
7	***Channel***	The video source's channel number to be decoded
8	***User Name***	The user name to log into the video source
9	***Password***	The password to log into the video source
10	***Description***	A short description to identify the video source
11	***Time***	How much time in seconds the video from this source will be displayed during the patrol rotation

FAQ

1. What is the default IP address of GXV3500?

The IP address of GXV35000 is given by DHCP at the factory default settings. You can perform a factory reset by pressing the RESET button on the device for 7 seconds.

2. Why can I not view the live video stream in Microsoft Internet Explorer?

Please check whether the IE add-on is installed correctly.

Once you log into the GXV3500's web interface Internet Explorer will indicate that "This website wants to install to following add-on: 'GSViewer. cab' from Grandstream Networks, Inc.". Please install this add-on when prompted by IE.

3. How do you manually uninstall the Grandstream video viewer add-on for IE?

Please follow these steps to uninstall the add-on:

1. Delete the *GSViewerX Control* from *C:\WINDOWS\Downloaded Program Files* directory
2. Delete *GSNetClient.dll, GS_Replay.exe, GSViewerX.ocx, hi_h264dec_w.dll, lik_VoiceEngine_dll.dll* and *GSViewerX.inf* from *C:\WINDOWS\system32*

4. Why can't I access the GXV3500 web configuration interface?

Q 1: Is your internet service down?

A 1: Connect a PC to the internet to test the connection.

Q 2: Are the PC and the device in different subnets?

A 2: Check the subnet mask and default gateway of the device and PC.

Q 3: Is there a conflict with another IP address?

A 3: Try to change the IP address of the device.

Q 4: Has the HTTP port been changed?

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A 4: Contact the administrator of the device for more information.

5. The GXV3500 web configuration page is not displayed correctly in Internet Explorer 8?

In IE8, Compatibility View might need to be enabled for the GXV3500 web configuration page to load properly. To enable compatibility view, open IE8, click ***Tools***>***Compatibility View Setting***, and add the GXV3500 web configuration pages to the Compatibility View.

6. Why does IE indicate to install Grandstream Video Viewer add-on after a firmware upgrade? The add-on was properly installed before the firmware upgrade process.

New firmware will often upgrade the add-on as well. To watch the live video stream, you must install the newest version of the add-on.

7. How do you watch secondary video stream?

Login to the home page of the GXV3500 web GUI, click Play to watch the video stream. To watch a secondary video stream, right click on the video, and select *Secondary Stream* on the pop-up menu. Try reinstalling the Grandstream Viewer add-on for IE if you cannot see the video stream.

8. Why is audio missing from the recorded video when an alarm is triggered?

Please double check whether the device has an audio input connected.
The GXV3500 has a MIC IN port for an audio input.

9. What is DDNS? Is it important for IP surveillance product to have DDNS support?

DDNS is an acronym for Dynamic Domain Name Service. It is important to choose an IP network camera that has DDNS support for dynamic IP addresses.
Chances are that the network has a dynamic IP address (which changes with every log on). A DDNS service makes sure that the camera's IP address always matches up to the current server address. DDNS also allows for a website to be linked to the IP camera that is constantly updated with the correct information and has a reliable feed.

10. Why is Windows Media Player unable to play the recorded videos files?

The GXV3500 uses the H.264 video codec. Windows Media Player may lack the proper H.264 decoder to play the recorded video. Please download the Microsoft FFDShow H.264 decoder from http://sourceforge.net/projects/ffdshow-tryout/ and install it.

11. Alarm Triggered Events do not work in GSurf.

Please double check the Alarm Action on your GXV3500. Login to the web GUI of the GXV3500, go to the *Motion Detection* or *Alarm Events* page, and make sure option *Upload to Alarm Center* is checked.

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12. It is recommended that you save your video files in different directories when using GSurf and GS_NVR.

GSurf and GS_NVR are different programs that have the ability to delete recorded video files. It is better to save video files in different directories when using GSurf and GS_NVR in the event that they automatically delete files that you might want to keep.

13. How can I use a cell phone to watch the GXV3500 video stream?

You must set the video resolution to QCIF to watch the GXV3500 video stream from a cell phone. Make sure to set the bit rate to 64kbps to ensure the best video quality.

14. Why doesn't the IP address of the device reset when I click the "Restore" button on the Maintenance page?

The GXV3500could be installed in areas that are not easy to access. For example, it could be installed on the roof of a building or the ceiling of an office. This makes it difficult to reinstall the device, therefore the "Restore" function will not clear the IP address. Press the RESET button on the device for at least 6 seconds until you hear a beep to perform a factory reset of all parameters (including the IP address).

15. Why can't the live video stream be viewed using a mobile phone or GSurf after changing the HTTP Port of the device?

Make sure that the RTSP port of the device is set to 2000 plus the HTTP Port number. For example, if the HTTP port is 88, then the RTSP port of the device that you configured on GSurf / mobile phone should be 2088.

16. Why is there a black / flashing bar at the bottom of the video feed?

This can occur if the GXV3500 does not recognize the standard of the connected camera. If you experience this issue, please restart the GXV3500. The GXV3500 will detect the standard of the connected camera and use it when the GXV3500 boots up. To avoid this make sure to connect analog cameras before booting up the GXV3500.

17. Port forwarding

Two ports must be forwarded on your router to watch video from a GXV3500 that is located on a private network from a PC in a public network. The web port (HTTP) and the RTSP port. Please make note that the RTSP port number changes according to the web port. If the web port is 80, then the RTSP port is 554. If the web port is not 80, then the RTSP port equals the web port +2000. For example, if the web port is 88, then the RTSP port will be 2088.

18. Tested PC display adapters.

Display Adapter	***Test Result***
SiS 650/651/740/661 FX/741/760 Series	Works normally
Intel(R) 82945R Express Chipset Family	Works normally

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VIA/S3G UniChrome Pro IGP	Works normally
NIVDIA Geforce 7300GS	Works normally
SiS 661FX	Works normally
SiS Mirage Graphics	Works normally
SiS 661 Series	Works normally
Intel(R) G33/G31 Express	Works normally
SiS Mirage3 Graphics	Works normally
SiS 661FX/GX Mirage Graphics	Works normally
S3 Graphics ProSavageDDR(Microsoft Corporation)	Works normally
XGI Velari Z7/Z9/Z9S V1.08.12	There is some delay when playing videos.
Intel 965 Express Chipset Family	Works normally
ATI Mobility Radeon X1300	Works normally
Intel(R) G45/G43 Express Chipset	Works normally
Mobile Intel 965 Express Chipset Family	Works normally
Mobile Intel(R) 4 Series Express Chipset Family	Works normally
Mobile Intel® 945GM Express Chipset Family	Works normally
Mobile intel® 915GM/GMS, 910GML Express Chipset Family	Works normally
Intel® G45/G43 Express Chipset	Works normally
ATI Technologies, RAGE XL PCI	This display adapter cannot display videos.

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